

APPLICATION OF INFLATION FACTOR

The inflation factor used to increase nursing home rates will be projected by a market basket index. The market basket methodology is contained in a special report by KMG Main Hurdman dated October 29, 1985. The project will continue to be made using the sum of least squares linear regression where the natural log is used, rather than the index itself. The most current 12 month history for each index will be used for the projection.

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Main Hurdman

Certified Public Accountants

Appendix III

STUDY OF THE UTAH NURSING HOME
INFLATION INDEX

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Utah Department of Health
Division of Health Care Financing

Gentlemen:

We appreciate the opportunity to evaluate the inflation index used by the Division of Health Care Financing (DHCF) to adjust payment rates to nursing homes.

Based on our findings, we recommend an inflation index using the cost categories and the indexes currently used by the Health Care Financing Administration (HCFA), but weighting these indexes by Utah nursing home weights as determined from the Facility Cost Profile (FCP) reports.

In arriving at this recommendation, we obtained and evaluated survey information from other States regarding treatment of the inflation rate problem. We also compared current HCFA market basket weights with Utah specific weights derived from FCP reports, and reviewed national and local index information for availability and appropriateness for use in the inflation index. Further details are in the accompanying study.

The cooperation and assistance extended to us by DHCF personnel in completing this study is greatly appreciated. If you have any further questions or comments regarding the study and our recommendation, we would be pleased to meet with you to discuss them.

KMG Main Hurdman

October 29, 1985



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STUDY OF THE UTAH NURSING HOME INFLATION INDEX

Objective

The purpose of the study was to evaluate the reasonableness of the inflation index used by the Division of Health Care Financing (DHCf) to adjust payment rates to Utah nursing homes. The study addressed alternatives to the present indexes for market basket components and current market basket weightings used by DHCf.

The primary objective of the study was to identify an inflation index that relates closely to the inflationary pressures Utah nursing homes are experiencing.

Background

DHCf currently uses a market basket index for the inflation index. This market basket index is the Health Care Financing Administration (HCFA) Skilled Nursing Facility (SNF) market basket with two minor modifications. In the Utah basket, cost categories entitled "payroll expenses" and "benefits" are combined, and different indexes are used for cost categories entitled "fuel and utilities" and "drugs" (Appendix A).

Approach

Our study included the following:

- Obtaining information from other States: A survey of how other States approach the inflation index problem provided methods for approaching the problem and types of indexes used.
- Analyzing present market basket components and weightings: Financial cost profiles (FCPs) for Utah nursing homes were used to develop a Utah market basket for comparison to the current HCFA SNF market basket.
- Identifying appropriate indexes: The appropriateness of using national indexes versus regional or local indexes which are more reflective of Utah cost pressures was explored.
- Making recommendations: The study findings were summarized, and a recommendation for a Utah nursing home inflation rate was made.

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Survey Findings

DHCF sent a survey form to the 49 States and the District of Columbia inquiring about the type of inflation index used for nursing home rate adjustments and requesting a description of that index. Thirty-eight States and the District of Columbia responded to the survey (Appendix B). The survey results are summarized as follows:

<u>No. of Responses</u>	<u>Type of Inflation Index Used</u>
11	CPI-U or CPI-W all items
10	Customized market basket
6	SNF market basket (HCFA or DRI)
4	No index used; negotiated
4	No composite index; index on certain line item costs
2	GNP implicit price deflator
2	Historical cost increases
Total	<u>39</u>

Sixteen of the 39 respondents use a market basket index. Two of these 16 use a simple basket consisting of two cost categories: 60 percent "wages" and 40 percent "other." Twenty-eight States reported using national indexes in the inflation rate index, such as CPI-U as the inflation index, or using CPI components in the market basket index computation. Eight States use regional or specific State data in connection with national indexes in computation of a market basket index.

Market Basket Analysis

One year's FCP costs (Schedule B, FCP Reported Expense) were aggregated by line item for all nursing homes submitting 12-month reports (either fiscal or calendar year) for the period July 1, 1983, to December 31, 1984. The line-item totals were accumulated by cost categories used in the DHCF market basket, and the relative weight of each category was calculated (Appendix C). The Utah and HCFA weights are compared below:

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Market Basket Analysis (Continued)

	<u>Utah-FCP</u> <u>All NH</u>	<u>HCFA</u> <u>SNF</u>
Payroll expense and benefits	64.98%	69.18%
Food	6.92	9.71
Fuel and utilities	5.42	5.26
Miscellaneous	4.11	4.97
Other business services	8.91	4.87
Supplies	3.18	3.40
Drugs	2.70	1.40
Health services	3.76	1.21

There are differences in the weights for "payroll expense and benefits" and "other business services." These differences appear off-setting, perhaps indicating that Utah buys some services which are provided internally on a national basis. "Food" cost weight is lower for Utah.

Index Review

In reviewing indexes to be used in determining an inflation rate index, several factors were considered:

- Is the index appropriate for the cost category to which it is applied?
- Does the index reflect the local inflationary pressures?
- Is sufficient index information available to forecast future index values?

A review of the CPI components indicated that the indexes which HCFA applies to the market basket weights are probably the most appropriate.

The following sources were reviewed to possibly find specific Utah data:

- Monthly Labor Review: The CPI has limited monthly data by metropolitan area, Denver-Boulder being the closest to Utah. However, there is not enough detail in this metropolitan data for a market basket approach.

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Index Review (Continued)

- Health Care Costs, Data Resources, Inc. (DRI): DRI publishes limited quarterly data for the Pacific Southwest Region, of which Utah is a part. With California included in this region, the data may not be reflective of Utah pressures. In addition, there appears to be insufficient information in these data for a market basket approach.
- Utah Annual Report, Vol. III, "Labor Market Information," Utah Department of Employment Security: Utah employment information, similar to the national data, is provided on an annual basis.
- Utah Facts, Bureau of Economic and Business Research, University of Utah: The source provides information on public utilities on an annual basis.
- Utah Energy Statistical Abstract, State of Utah Natural Resources, 2nd ed. (1983): This report provides information on utilities. It is not published on a regular basis.

There does not appear to be sufficient Utah data to support a detailed market basket approach with index data which is totally specific to Utah. Also, the available Utah data is insufficient to provide adequate time series information for forecasting future values.

Market Basket and Index Analysis

The inflation rate survey shows three main approaches to the nursing home inflation rate index problem. These approaches are:

- Use of CPI-U all items index;
- Use of the HCFA market basket; or;
- Use of a customized market basket.

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Index Review (Continued)

Using historical data for input indexes, the following table shows the yearly inflation rate for the calendar years 1980 to 1984 under various scenarios:

<u>Inflation Index</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
1. Utah basket weights, all national indexes	10.07%	9.10%	5.79%	6.45%	4.06%
2. HCFA basket weights, all national indexes	9.86	8.68	5.63	6.35	3.86
3. Utah basket weights, Utah wage index with other national indexes	9.35	11.66	5.07	1.75	3.37
4. Simple Utah basket (68-32), all national indexes	10.13	8.60	5.14	6.23	3.72
5. Simple Utah basket (68-32), Utah wage index with other national indexes	9.28	11.25	4.44	1.43	3.00
6. CPI-U all items	12.40	8.94	3.87	3.80	3.95

Except for the two cases where Utah wage data are used, the various inflation indexes show similar increases. The computations for this table are in Appendix D.

Recommendations

The two main issues in computing an inflation rate index reflective of Utah conditions are the input indexes to use, and the weights to give to each.

It is difficult to find indexes or similar information on a local basis. Although some data exists, such as Utah wage data, there is not sufficient data for forecasting future index values. Therefore, DHCF will need to rely on the national indexes. The ones they are currently using are widely accepted and used by other States.

DHCF does have the facility to develop a market basket with unique Utah weights. This can be done by aggregating cost data from the FCP reports and calculating the relative weights of each cost category. These weights could be reviewed on an annual basis as information from the FCP's is accumulated.

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Recommendations (Continued)

We, therefore, recommend using a nursing home inflation rate, calculated by using the cost categories and the indexes which DHCF currently employs, and also using Utah nursing home specific weights as calculated from the FCP reports.

It should be noted that the FCP's have not been audited for the last several years. Accordingly, it might be appropriate to audit the FCP's for the most current fiscal year to provide the base for moving forward.

APPENDIX A
UTAH'S SNF MARKET BASKET INDEX

<u>Description</u>	<u>Weight</u>	<u>Source</u>
Payroll expense and benefits	69.18%	U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, SIC-805, Table C-2, Average Weekly Wage Component of Personal and Nursing Care
Food	9.71%	U.S. Department of Labor, Bureau of Labor Statistics, Monthly Labor Review, Food and Beverage Component for CPI-U from Table 20
Fuel and utilities	5.26%	U.S. Department of Labor, Bureau of Labor Statistics, Monthly Labor Review, Fuel and Other Utilities Compo- nent for CPI-U, from Table 20*
Miscellaneous	4.97%	U.S. Department of Labor, Bureau of Labor Statistics, Monthly Labor Review, Services Component for CPI-U, from Table 20
Other business services	4.87%	U.S. Department of Labor, Bureau of Labor Statistics, Monthly Labor Review, All Items CPI for CPI-U, from Table 20
Supplies	3.40%	U.S. Department of Labor, Bureau of Labor Statistics, Monthly Labor Review, All Items CPI for CPI-U, from Table 20

*Different source than used by HCFA.